



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,439	05/23/2001	Ryuusuke Kaneda	208970US-2	8893

22850 7590 05/20/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

PHU, SANH D

ART UNIT PAPER NUMBER

2682

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/862,439

Applicant(s)

KANEDA ET AL.

Examiner

Sanh D Phu

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-6 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 12/10/2004.

Claim Rejections – 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8–10 are rejected under 35 U.S.C. 102(b) as being anticipated by Mutsumi Serizawa (JP 63–250223).

–Regarding to claims 1 and 8, Serizawa discloses a wireless communication apparatus/method comprising:

a multipath detection part (3, see fig. 2) which detects a state of multipath in said wireless communication apparatus; and

a send part (mobile station, see Fig. 1) which sends multipath detection information detected by said multipath detection part to another a wireless communication apparatus (base station, see Fig. 1) via a wireless network;

wherein said another wireless communication apparatus (base station) generates a signal (7, see Fig. 2) inverted from an interference wave signal (2, fig. 2) generated by using said multipath detection information (1) and sends the inverted signal and a send signal (8) to said wireless communication apparatus via the wireless network, and said wireless communication apparatus receives the inverted signal and the send signal so that an interference is canceled by the inverted signal (see Fig. 1 and 2).

—Regarding to claim 9, Serizawa discloses a wireless communication method comprising the steps of:

a first wireless communication apparatus (MS) detecting a state of multipath in said first wireless communication apparatus (see fig. 1 and 2);

said first wireless communication apparatus sending multipath detection information (1, Fig. 1 and 2) on said state to a second wireless communication apparatus (BS) via a wireless network;

Art Unit: 2682

said second wireless communication apparatus (BS) receiving said multipath detection information;

said second wireless communication apparatus generating a signal (6, fig. 2) for canceling a multipath component in said first wireless communication apparatus on the basis of said multipath detection information; and

said second wireless communication apparatus (BS) sending said signal (6) for canceling said multipath component to said first wireless communication apparatus via the wireless network (see Fig. 1 and 2),

wherein said signal for canceling said multipath component is a signal (7) inverted from an interference wave signal (2) generated by using multipath detection information sent from said first wireless communication apparatus via the wireless network (see Fig. 1 and 2).

-Regarding to claim 10, Serizawa discloses a wireless communication apparatus comprising:

a multipath component canceling signal generation part (9) which generates a signal (7) which cancels a multipath component in another wireless communication apparatus (MS) on the basis of multipath detection information

representing a state of multipath sent from said another wireless communication apparatus via a wireless network (see Fig. 1 and 2); and
a send part which sends said signal which cancels said multipath component generated in said multipath component canceling signal generation part to said another wireless communication apparatus via the wireless network (see Fig. 1 and 2),

wherein said signal (7) which cancels said multipath component is a signal inverted from an interference wave signal generated by using multipath detection information sent from said another wireless communication apparatus via the wireless network (see Fig. 1 and 2).

Allowable Subject Matter

4. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

—Regarding claim 11, the prior art of record fails to teach the wireless communication apparatus sends an opposite phase wave of said signal which cancels said multipath component at a time position of a multipath having no

interference in order to cancel said signal which cancels said multipath component.

5. Claims 4–6 are allowed.

–Regarding to claim 4, the prior art of record fails to teach said interference wave detection part includes a filter part which filters a synthesized wave of said multipath component and said send wave; and
an interference wave signal generation part which generates an interference wave signal corresponding to that in said wireless communication apparatus at the other end by comparing output signal from said filter part and said send wave.

Response to Arguments

6. Applicant's arguments with respect to claims 1 and 8–10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Art Unit: 2682

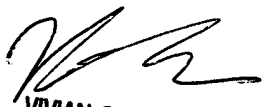
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D Phu whose telephone number is (703) 305-8635. The examiner can normally be reached on 8:00-16:30.

The fax phone number for the organization where this application or proceeding is assigned is (703) 746-9817.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-8635.

Sanh D. Phu
Examiner
Art Unit 2682

SP


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600